**IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION**

HEADWATER RESEARCH LLC,
 	
      Plaintiff,
 	
      v.
 	
T-MOBILE USA, INC. AND SPRINT CORP.,
 	
      Defendants.
	Case No. 2:23-cv-00379-JRG-RS
	
	JURY TRIAL DEMANDED

**HEADWATER'S RESPONSE TO DEFENDANTS' RULE 12(c) MOTION FOR
JUDGMENT ON THE PLEADINGS THAT THE ASSERTED CLAIMS OF
THE '541 AND '613 PATENTS ARE PATENT-INELIGIBLE UNDER § 101**

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TABLE OF ABBREVIATIONS

Abbreviation	Term
Headwater	Plaintiff Headwater Research LLC
'541 patent	U.S. Patent No. 8,589,541
'613 patent	U.S. Patent No. 9,215,613
Asserted Patents	'541 patent and '613 patent
Verizon	Defendants Cellco Partnership d/b/a Verizon Wireless and Verizon Corporate Services Group, Inc.
T-Mobile	Defendants T-Mobile USA, Inc. and Sprint Corp.
AT&T	Defendants AT&T Services, Inc., AT&T Mobility, LLC, and AT&T Corp.
Defendants	Defendants Verizon (in the -352 case) or T-Mobile (in the -379 case) or AT&T (in the -397 case)

I.   INTRODUCTION AND STATEMENT OF ISSUES

Defendants' motion for judgment on the pleadings under Rule 12(c) that the asserted claims of U.S. Patent Nos. 8,589,541 ("'541 patent") and 9,215,613 ("'613 patent") are patent-ineligible should be denied. Defendants fail at both steps of the eligibility inquiry.

At Step One, Defendants mischaracterize the claims and commit legal error by failing to consider what the patents assert as the claimed advance. Here, a central claimed advance of the '541 and '613 patents is placing network service usage controls on the wireless end-user device (as opposed to prior art network-centric approaches that suffered from many limitations). Understanding this makes clear that the asserted claims are directed to device-centric solutions for protecting network capacity that improve the performance and operation of wireless end-user devices and they communicate wireless networks with. Such claims are patent-eligible as a matter of law. As to Step Two, Defendants fail to provide any evidence—much less clear and convincing evidence—that the claimed inventions are conventional.

The Court should deny Defendants' motion on the merits, but it is also procedurally defective. This Rule 12(c) motion is untimely because it wasn't filed "early enough not to delay trial" (especially since Defendants don't contend that amendment would be futile, and Headwater would be entitled to amend its pleadings in any event). The record suggests that Defendants filed this § 101 motion under Rule 12(c) to circumvent greatly exceed the Court's page limits for summary judgment briefing. This is improper and independently supports denial.

II.   BACKGROUND OF THE ASSERTED PATENTS

The Asserted Patents are derived from a common specification and co-invented by the same three inventors. The primary inventor, Dr. Gregory Raleigh, is a renowned scientist, inventor, and entrepreneur, who is credited for inventing the MIMO technology used in contemporary Wi-Fi, 4G, and 5G wireless standards.

A.   The '541 Patent

The '541 patent is entitled *"Device-assisted services for protecting network capacity"* and is directed to technical problems concerning network congestion and protecting network capacity. The inventors recognized that around the time of invention in 2009, *"a network capacity crunch is developing due to increasing network congestion on various wireless networks, such as mobile networks."* '541 patent at 9:57–60. For example, the "increasing popularity of various smart phone devices" such as the new Apple iPhone® led to a small number of devices disproportionately consuming network carrier resources and overloading the network. *See id.* at 9:61–10:4 (3% of smart phone device users generating about 40% of AT&T's network data traffic), 10:36–51 ("if multiple and/or all devices allow all applications to indiscriminately access or attempt to access network resources or transmit/receive traffic, then the network can generally become overloaded").

The inventors also recognized certain *application behavior* on wireless user devices (e.g., "background network accesses and signaling," "background email downloads") were wasteful and exacerbating the network capacity crunch. "For example, even when the user is not directly interacting with or benefiting from this type of application, *the application can be running in the background and continuing to consume potentially significant network resources*." *Id.* at 14:44–51.[1] Such application behavior includes: "software updates for OS and applications," "frequent OS and application background network accesses and signaling," "frequent network discovery and/or signaling," and "content subscription service updates and downloads. *Id.* at 14:42–15:4.

While other means of addressing network congestion and protecting network capacity were discussed in the art, they were insufficient. For instance, "[n]etwork carriers have typically attempted to manage network capacity using various *purely central/core network based*

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[1] All emphasis in quoted material added unless otherwise noted.

approaches," such as blocking service usage activity "somewhere in the network behind the base station." *Id.* at 15:52–67. But such approaches "can have *several limitations*," including providing a poor user experience and wasting network resources on unsuccessful transmissions and repeated connection attempts "even though no useful service is being allowed." *Id.* at 15:60–16:12.

An additional drawback of controlling service usage activity at the network is having "no mechanisms or support to link to a device user interface (UI) to inform the user what is happening and why it is happening." *Id.* at 16:13–20. Not could the user adjust these controls though the UI. "This can lead to a frustrating user experience and reduced carrier customer satisfaction." *Id.*

Accordingly, the inventors conceived an unconventional solution: decentralizing network controls away from "purely centralized network solutions with no assistance from a device based software agent" and toward "*Device Assisted Services (DAS) for protecting network capacity.*" *Id.* at 15:56–16:12. This relies on the wireless end-user device to determine whether certain network activity is relatively wasteful (e.g., background activities) and to control network activity at the device itself (including at the application / application interface level). This allows more granular monitoring of network service usage and to balance protecting network capacity with maintaining an acceptable user experience. *Id.* at 16:38–45 ("*What is needed* is intelligent network monitoring . . . e.g., at the packet level/layer, *network stack application interface level/layer, and/or application level/layer* . . . and to effectively manage the network service usage for protecting network capacity (e.g., *while still maintaining ana acceptable user experience*).").

The inventors' focus on "Device Assisted Services" allows additional features/advantages, as described in the specification and reflected in the '541 claims. "In some embodiments, a UI provided that also informs the user when there are options to set, override, or modify service usage controls for the purpose of protecting network capacity." Further, the device can apply control

policies based on information from the network, such as a network busy state. *See id.* at 16:45–57

("Using Device Assisted Services (DAS) techniques" would enable network carriers/operators "to

differentially control network service usage, and/or to differentially charge for network service

usage based on, for example, a network busy state, for protecting network capacity").

Aspects of the inventors' proposed DAS solution are illustrated in Fig. 3 below, which is

"a functional diagram of an architecture . . . for providing DAS for protecting network capacity in

accordance with some embodiments" (*id.* at 8:9–14; *see also id.* at 46:3–55:6):

FIG. 3
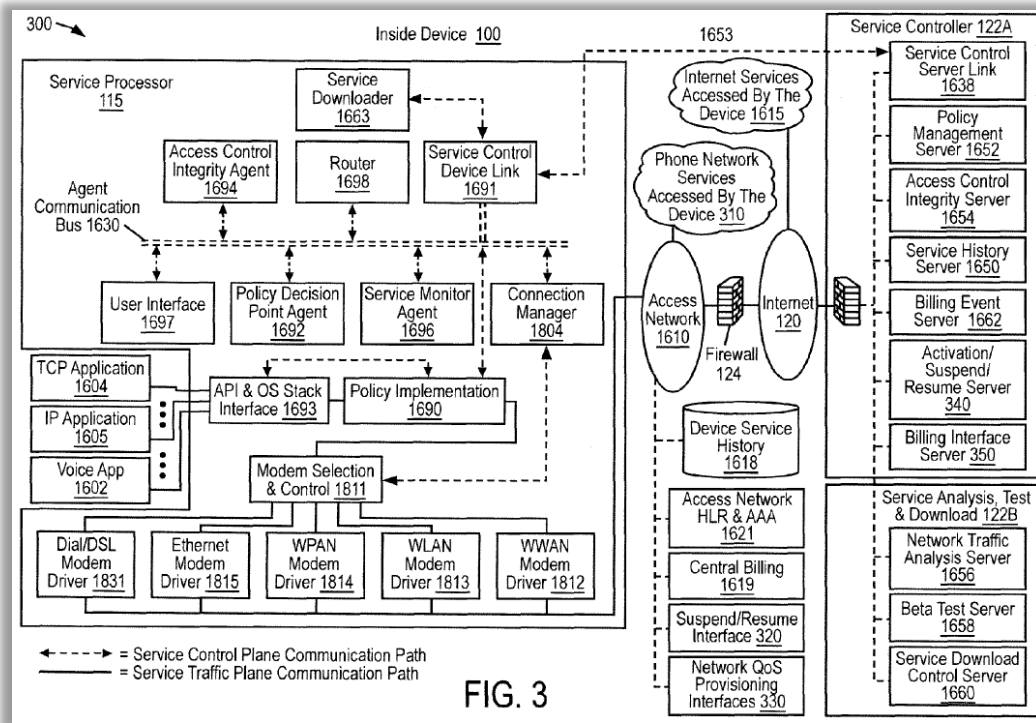
The asserted claims of the '541 patent are dependent claims 79 and 83. They describe

specific means of controlling background service usage activity of a wireless end-user device at

the application / application interface level. This is done, for example, by "intercepting *a stack*

application programming interface (API) level or application messaging layer request" (claim 79)

or by intercepting or modifying "*an application interface message*" (claim 83).

'541 Patent, Claims 79 and 83	
[1.pre]	A non-transitory computer-readable storage medium storing machine-executable instructions that, when executed by one or more processors of a wireless end-user device, cause the one or more processors to:
[1.a]	identify a service usage activity of the wireless end-user device, the service usage activity being associated with a first software component of a plurality of software components on the wireless end-user device, the service usage activity comprising one or more prospective or successful communications over a wireless network;
[1.b]	determine whether the service usage activity comprises a background activity;
[1.c]	determine at least an aspect of a policy based on a user input obtained through a user interface of the wireless end-user device or based on information from a network element, the policy to be applied if the service usage activity is the background activity, the policy at least for controlling the service usage activity;
[1.d]	and if it is determined that the service usage activity is the background activity, apply the policy.
[79]	The non-transitory computer-readable storage medium recited in claim 1, wherein apply the policy comprises at least assist in intercepting a stack application programming interface (API) level or application messaging layer request.
[83]	The non-transitory computer-readable storage medium recited in claim 1, wherein apply the policy comprises at least assist in intercepting, modifying, blocking, removing, injecting, swapping, or replacing an application interface message.

B.   The '613 Patent

The '613 patent is entitled "Wireless end-user device with differential traffic control policy list having limited user control." It shares a specification with the '541 patent and addresses similar technical problems of network congestion and protecting network capacity. '613 patent at 3:28–40, 4:6–40, 8:4–9:10, 9:23–28. Mobile applications perform many activities that are imperceptible to the user. The '613 patent recognizes the problem of such application activities frequently "running in the background and continuing to consume potentially significant network resources," such as "software updates," "background network accesses and signaling," and "background email

downloads." *Id.* at 8:4–42. Such activities can occur even when the user is not interacting with the

application in the device user interface foreground. *Id.*, cl. 1.

The inventors also recognized another shortcoming associated with wasteful network

activity: its effects on the *power consumption* of the wireless device itself. When the device and/or

modem sends signals or goes through "power cycling or transitions from one power save state to

another," more battery or other power is consumed each time. *Id.* at 7:42–62, 8:35–37 ("inefficient

network access sequences during frequent power cycling or power save state cycling"). Existing

techniques for network control failed to address this problem. For example, "purely central/core

network based approaches," prompt user devices to make multiple attempts to re-establish a

network connection. *Id.* at 9:30–44. And even where smart phone vendors tried to save battery life

by implementing a "fast dormancy" feature, this can exacerbate wasteful signaling and power drain

"by prematurely requesting a network release only to follow on with a request to connect back the

network or by a request to re-establish a connection with the network." *Id.* at 9:11-22.

The inventors solved these problems using a device-focused approach that differed from

network-centric prior art techniques, as discussed above for the '541 patent. *Id.* at 9:44–50. The

'613 patent describes embodiments "for protecting network capacity include controlling network

service usage activities at the source of the demand—the device." *Id.* at 9:44–46. Further, in some

embodiments, "service usage is controlled in a manner that delays, prevents, or reduces *the*

frequency of service usage activity re-try attempts to connect to the network." *Id.* at 9:46–50.

For example, claim 1 of the '613 patent recites a wireless end-user device that classifies

whether the device is connected to and communicating data with a wide area network (WWAN)

modem, as opposed to a wireless local area network (WLAN) modem. Based on that classification,

as well as classification of a particular application as capable of background activities, the device

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can selectively allow or deny Internet service activities for that application. The claim further

distinguishes between a "first" set of applications for which the user can augment the differential

traffic control policy and a "second" set of applications for which the user cannot. The first set

could be optional background applications (e.g., game updates) that the user can turn off, whereas

the second set could be system or security applications that should remain running.

The asserted claims of the '613 patent are claims 1, 12, 15, 16, and 18. Claim 1 recites:

'613 Patent, Claim 1	
[1.pre]	A wireless end-user device, comprising:
[1.a]	a wireless wide area network (WWAN) modem to communicate data for Internet service activities between the device and at least one WWAN, when configured for and connected to the WWAN;
[1.b]	a wireless local area network (WLAN) modem to communicate data for Internet service activities between the device and at least one WLAN, when configured for and connected to the WLAN;
[1.c]	a non-transient memory to store a differential traffic control policy list distinguishing between a first one or more applications resident on the device and a second one or more applications and/or services resident on the device, and, a differential traffic control policy applicable to at least some Internet service activities by or on behalf of the first one or more applications;
[1.d]	an interface to allow a user to augment the differential traffic control policy for the first one or more applications but not for the second one or more applications and/or services; and
[1.e]	one or more processors configured to
[1.f]	classify a wireless network to which the device currently connects in order to communicate data for Internet service activities as at least one of a plurality of network types that the device can connect with,
[1.g]	classify whether a particular application capable of both interacting with the user in a user interface foreground of the device, and at least some Internet service activities when not interacting with the user in the device user interface foreground, is interacting with the user in the device user interface foreground, and
[1.h]	selectively allow or deny one or more Internet service activities by or on behalf of the particular application based on whether or not the particular application is one of

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'613 Patent, Claim 1
the first one or more applications, the differential traffic control policy, including any applicable user augmentation of the differential traffic control policy, and the classifications performed by the one or more processors.

III.   LEGAL STANDARD

A.   Judgment on the Pleadings Under Rule 12(c)

A motion for judgment on the pleadings under FED R. CIV. PRO. 12(c) "is designed to dispose of cases where the material facts are not in dispute and a judgment on the merits can be rendered by looking to the substance of the pleadings and any judicially noticed facts." *Great Plains Trust Co. v. Morgan Stanley Dean Witter & Co.*, 313 F.3d 305, 312 (5th Cir. 2002). "Rule 12(b)(6) decisions appropriately guide the application of Rule 12(c) because the standards for deciding motions under both rules are the same." *Id.* at 313 n.8.

A court must assume that all well-pleaded facts are true and view those facts in the light most favorable to the plaintiff. *Bowlby v. City of Aberdeen*, 681 F.3d 215, 218 (5th Cir. 2012). The court may consider "the complaint, any documents attached to the complaint, and any documents attached to the motion to dismiss that are central to the claim and referenced by the complaint." *Lone Star Fund V (U.S.) L.P. v. Barclays Bank PLC*, 594 F.3d 383, 387 (5th Cir. 2010). The court must then decide whether those facts state a claim for relief that is plausible on its face. *Bowlby*, 681 F.3d at 217. "A claim has facial plausibility when the pleaded factual content allows the court to draw the reasonable inference that the defendant is liable for the misconduct alleged." *Id.*

B.   Patent Eligibility Under 35 U.S.C. § 101

To determine patent-eligibility under § 101, courts conduct a two-step analysis articulated in *Alice Corp. Pty. v. CLS Bank Int'l,* 573 U.S. 208 (2014). The court must determine: "(1) whether the claim, as a whole, is 'directed to' patent-ineligible matter—here, an abstract idea—and (2) if

so, whether the elements of the claim, considered individually or as an ordered combination 'transform the nature of the claim' into a patent-eligible application." *Ancora Techs., Inc. v. HTC Am., Inc.*, 908 F.3d 1343, 1347 (Fed. Cir. 2018)

At Step One, the "directed to" inquiry begins by asking "what the patent asserts to be the 'focus of the claimed advance over the prior art.'" *TecSec, Inc. v. Adobe Inc.*, 978 F.3d 1278, 1292 (Fed. Cir. 2020) "In conducting this inquiry, the focus is on the claim language considered in the light of the specification." *Id.*; *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1335 (Fed. Cir. 2016)). The Supreme Court has cautioned against "overgeneralizing claims," explaining that "characterizing the claims at 'a high level of abstraction' that is 'untethered from the language of the claims all but ensures that the exceptions to § 101 swallow the rule.'" *TecSec*, 978 F.3d at 1293. Instead, the "Step 1 analysis . . . depends on an accurate characterization of what the claims require and of what the patent asserts to be the claimed advance." *Id.* at 1294. The accuracy of those characterizations is crucial to the Step 1 analysis. *Id.*

In cases involving improvements to computing technology and networks, the Federal Circuit has identified "two inquiries of significance here: [1] whether the focus of the claimed advance is on a solution to a problem specifically arising in the realm of computer networks or computers; and [2] whether the claim is properly characterized as identifying a specific improvement in computer capabilities or network functionality, rather than only claiming a desirable result or function." *Id.* at 1293.

If claims are directed to patent-ineligible subject matter, Step Two calls for the court "consider the elements of each claim both individually and 'as an ordered combination' to determine whether [the claims contain] an element or combination of elements that is 'sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the [abstract

idea] itself.'" *Alice*, 573 U.S. at 217-18. Even where elements are conventional, the specific arrangement of conventional technologies can also form the inventive concept. *BASCOM Glob. Internet Servs., Inc. v. AT&T Mobility LLC*, 827 F.3d 1341, 1349 (Fed. Cir. 2016).

Patent eligibility is a question of law, based on underlying facts. *Berkheimer v. HP Inc.*, 881 F.3d 1360, 1368 (Fed. Cir. 2018). Whether the claim elements or combination are well-understood, routine, and conventional is a question of fact. *Aatrix Software, Inc. v. Green Shades Software, Inc.*, 882 F.3d 1121, 1128 (Fed. Cir. 2018).

IV.   THE ASSERTED CLAIMS OF THE '541 PATENT ARE PATENT-ELIGIBLE

A.   *Alice* Step One: Claims 79 and 83 Are Not Directed to an Abstract Idea

1.   Claims 79 and 83 are "directed to" device-centric solutions for protecting network capacity that improve the performance and operation of wireless end-user devices and the wireless networks with which they communicate.

The '541 patent is entitled "Device-assisted services for protecting network capacity." Asserted claims 79 and 83 are *directed to* device-assisted services stored/executed on a wireless end-user device for protecting network capacity by (1) identifying network service usage activity associated with software on the device; (2) differentially controlling background service usage activity based on (i) input from a user interface of the device or (ii) information from the network; and (3) wherein the differential control occurs at the application interface or application level of the device (e.g., in claim 79 by "intercepting a stack API level or application messaging layer request" in claim 83 by intercepting or modifying "an application interface message").

The claims and specification of make clear that the focus of the claimed advance is on a solution to problems specifically arising with wireless end-user devices and wireless networks. The '541 explains that a network capacity crunch was developing due to "increasing popularity of various smart phone devices" such as the new iPhone. *See generally* '541 patent overview and

citations above. The inventors recognized that certain *application behavior* on wireless user devices (e.g., "software updates for OS and applications," "frequent OS and application background network accesses and signaling," and "frequent network discovery and/or signaling") were wasteful and disproportionately consumed network resources. *See id.* This degraded both the operation and performance of the wireless network (causing it to become overloaded) and the wireless user device itself (causing repeated device/modem power cycling and "inefficient network access sequences during frequent power cycling or power save state cycling"). *See id.*

These technical problems were specific to wireless end-user devices (e.g., smart phones) and the wireless networks with which they communicate. And they were unlike human, economic, or business problems that existed before the advent of such wireless devices and networks.

The '541 patent teaches technical solutions that were different from the prior art. As the patent makes clear, a focus of the claimed advance is moving network service controls away from "purely centralized network solutions with no assistance from a device based software agent" in favor of "controlling network service usage activities at the source of the demand—the device." *See id.* The inventors described such solutions as "Device Assisted Services (DAS) for protecting network capacity" that are stored and executed on the wireless end-user device itself.

This avoids limitations with network-centric approaches and allowed the device to determine whether certain service usage activity is wasteful (e.g., as background activities and depending on the device's policy) and control them accordingly. And unlike prior art device-centric approaches—which involve inefficient repetitive signaling designed to "sav[e] device resources [] rather than network resources" ('541 patent at 15:40–50)—the inventors provided solutions that benefit the device *and* reduce network congestion. This was done, for example, by controlling background activity communications at the application / application level of the device

before the communications reach the wireless network. *See* cl. 1 (describing differential traffic control for "prospective" communications over a wireless network"), cls. 79 & 83 (describing network controls by "intercepting" a stack API level, an application messaging layer request, or an application interface message); *see also id.* at 98:5–8 ("before a connection is allowed to be opened (e.g., before a socket is opened), transmission, or a flow/stream is initiated, it is blocked and a message is sent back to the application"). *Id.* at 91:41-49.

The claimed advances are reflected in claims 79 and 83 themselves, which are "directed to" a specific configuration of device-assisted services stored and executed on a wireless end-user device for protecting network capacity, as described above. The specific configuration achieves the benefits of the invention and improves the functionality and performance of both wireless end-user devices and the wireless networks with which they communicate.

The Federal Circuit has repeatedly found analogous claims to be non-abstract and eligible. In *Packet Intelligence LLC v. NetScout Systems, Inc*., the Court found that the intrinsic record made clear "that the claimed invention presented a technological solution to a technological problem" and the claims were thus patent-eligible as a matter of law. This was because "the focus of the claims is a specific improvement in computer technology: a more granular, nuanced, and useful *classification of network traffic*." 965 F.3d 1299, 1309-10 (Fed. Cir. 2020). Likewise, in *Koninklijke KPN N.V. v. Gemalto M2M GmbH*, the Court reversed a ruling that the challenged claims were abstract, holding instead that the claims "are directed to a non-abstract improvement in an existing technological process (i.e., error checking in data transmissions)" in wireless devices. 942 F.3d 1143, 1150 (Fed. Cir. 2019). And in *Core Wireless Licensing S.A.R. L. v. LG Elecs., Inc*., the Court held patent eligible claims directed to an improved user interface on a wireless device that "enabled users to more quickly access stored data and programs in small-

screen electronics" by determining, for instance, when an application was in the background. 880 F.3d 1356, 1359-63 (Fed. Cir. 2018). The intrinsic record confirms the same in this case: claims 79 and 83 of the '541 patent are patent-eligible as a matter of law.

2.   Defendants' cursory and generic arguments ignore the claimed advances of the '541 patent and fail as a matter of law

Defendants' characterization of what claims 79 and 83 are "directed to" is materially wrong and repeatedly fails to consider the '541 patent's claimed advances. Defendants' characterization omits any mention of a wireless end-user device. But claims 79 and 83 describe device-assisted services that are expressly stored and executed by a wireless end-user device (reciting a "computer-readable storage medium" that stores instructions that are "executed by one or more processors of a wireless end-user device"). And placing network controls on the device itself is a focus of the claimed advance, as discussed in the specification and explained above.

Further, the ordered combination of elements includes specific features/improvements that are tied to the claimed advance. They include: (1) identifying background service usage activity associated with software of the device; (2) providing a UI on the device for adjusting control policies; (3) applying controls based on device input/policies in conjunction with information from the network (e.g., a network busy state); and (4) applying controls at the application / application interface level of the device. All of these are described in the specification as advantages of the device-centric approach proposed by the inventors. And *none* could be realized under the "purely central/core network based approaches" that were the focus of the prior art.

Defendants' attempt to equate the asserted claims to the actions of a human "assistant" fails. This analogy is not remotely plausible. The "simple selective action" that can be performed by a human has nothing to do with the claims and bears no resemblance to the intrinsic record here. The claimed advances relate to improvements to wireless end-user devices and wireless

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networks, and address problems specific to those technologies (such as the proliferation of smart phones and wasteful "software updates for OS and applications," "frequent OS and application background network accesses and signaling," and "frequent network discovery and/or signaling" that disproportionately consumed network and device resources).

Based on the "assistant" analogy, Defendants argue that the claims here can be performed by the human mind. Again, this is implausible. A human mind cannot differentially control "background" activities (itself a technical term in for computer operating systems and applications), much less control such activities at the application or application interface level as recited in the claims. *See* cl. 79 & 83 (describing network controls by "intercepting" a stack API level, an application messaging layer request, or an application interface message).

The Federal Circuit rejected a similar argument' in *SRI International, Inc. v. Cisco Systems, Inc.*, where the Court upheld as patent-eligible a claim reciting "network connection requests" and "network connection denials," explaining that such activities are "not the type of human activity that § 101 is meant to exclude." 930 F.3d 1295, 1301, 1304 (Fed. Cir. 2019) ("Indeed, we tend to agree with SRI that the human mind is not equipped to detect suspicious activity by using network monitors and analyzing network packets as recited by the claims.").

Defendants' cited cases are also inapposite. At bottom, those cases involved claims that failed to recite any improvement in computer technology. Here, claims 79 and 83 do recite such improvements—they recite an improved wireless end-user device that protects network capacity, conserves device resources, and has little or no effect on the user experience. These improvements are reflected in the claims and extensively discussed in the specification.

In *People.ai, Inc. v. Clari Inc.* the claims had little to do with computers. No. 2022-1364, 2023 WL 2820794, at *1 (Fed. Cir. Apr. 7, 2023). Their focus was on automating long-standing

business practices (managing customer relationships) that could be—and previously were—manually performed by humans. Likewise, in *Intellectual. Ventures IL LC v. Symantec Corp.*, the claims were directed to screening email. 838 F.3d 1307, 1313 (Fed. Cir. 2016). The court found a close analogy to the human practice of a corporate mailroom. Here, unlike these cases, the asserted claims aren't focused on a long-standing human or business practice. Nor can they characterized as merely "automating" practices that had previously performed by humans.

Defendants also rely on *Ericsson Inc. v. TCL Communication Techs. Holdings Ltd.*, 955 F.3d 1317 (Fed. Cir. 2020), but that case is plainly distinguishable. The claim in *Ericsson* was broadly directed to "access" to some general "platform." It said nothing about the factors, if any, to decide whether access is denied. *Id.* at 1325–26. As a result, the Federal Circuit found that the four components in the claim "collapse[d] into simply 'an access controller for controlling access.'" Here, claims 79 and 83 are far more detailed, include several steps, and provides both the factors and mechanism for controlling service usage activity. Further, the *Ericsson* claim was not limited to any type of device, and the Court admonished Ericsson for suggesting it was limited to mobile phones. Here, claims 79 and 83 expressly require a wireless end-user device, and that is the focus of the claimed advance (claim 1 reciting a "computer-readable storage medium" that stores instructions "executed by one or more processors of a wireless end-user device").

B.   *Alice* Step Two: Claims 79 & 83 Contain Inventive Concepts

While Step Two should not be reached here, Defendants' arguments at Step Two likewise fail because claims 79 and 83 recite device-assisted services for protecting network capacity that were inventive and unconventional at the time of the invention.

As discussed in the overview of the '541 patent, the inventors conceived the unconventional solution of decentralizing network controls away from "purely centralized network

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solutions with no assistance from a device based software agent" and toward "*Device Assisted Services (DAS) for protecting network capacity.*" *Id.* at 15:56–16:12. This avoided several limitations of network-centered approaches and relies on the wireless end-user device to determine whether certain network activity is relatively wasteful (e.g., background activities) and to control network activity at the device itself (including at the application / application interface level). This allows more granular monitoring of network service usage and to balance protecting network capacity with maintaining an acceptable user experience. *Id.* at 16:38–45.

Defendants misstate and misapply the law and present no developed argument regarding *Alice* Step Two. Nor do Defendants offer any evidence. The '541 patent *never* concedes that any claimed features (much less the ordered combination in claims 79 and 83) law conventional. The law is also firmly on Headwater's side.

The Federal Circuit's decision in *BASCOM* is particularly instructive and demonstrates that the asserted claims are inventive. In *BASCOM*, the Court analyzed a claim for a "content filtering system for filtering content retrieved from an Internet computer network by individual controlled access network accounts" including "a local client computer" and "an ISP server," which, in isolation, were conventional. *BASCOM Glob. Internet Servs., Inc. v. AT&T Mobility LLC*, 827 F.3d 1341 (Fed. Cir. 2016). Despite this, the Federal Circuit held that the ordered combination of elements included an inventive concept, which was described and claimed as "the installation of a filtering tool at a specific location, remote from the end-users, with customizable filtering features specific to each end user. This design gives the filtering tool both the benefits of a filter on a local computer and the benefits of a filter on the ISP server." *Id.* at 1350. The court further held that "the claims . . . do not preempt the use of the abstract idea of filtering content on the Internet or on generic computer components performing conventional activities." *Id.* at 1352.

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The same reasoning applies to the asserted claims here. The inventive concept in *BASCOM* was to move filtering functionality from the client to the server. Similarly (in reverse), one inventive concept here was to move network service control functionality from the centralized/core network (the server) to the wireless user device (the client). This avoids certain drawbacks and allows additional device-side control parameters (input from user interface of device, application level control) to be considered. For purposes of Step Two, this is equivalent to the inventive concept the Federal Circuit found eligible in *BASCOM*. *See VidStream, LLC v. Twitter, Inc.*, No. 3:16-CV-0764-N, 2022 WL 992743, at *5 (N.D. Tex., Apr. 1, 2022) ("[T]he inventive concept in *BASCOM* was to move customizable filtering from the client to the server. The claims here do that in reverse. The inventive concept here is to move video format compatibility enforcement from the transcoder on the server to the video capture process on the client. The Court cannot meaningfully distinguish the proffered inventive concept here from the inventive concept the Federal Circuit found to be patent-eligible in *BASCOM*.") (denying motion to dismiss).

V.   THE ASSERTED CLAIMS OF THE '613 PATENT ARE PATENT-ELIGIBLE

A.   *Alice* Step One: The Asserted Claims Are Not Directed to an Abstract Idea

Like the '541 patent, the '613 patent teaches device-centric solutions for protecting network capacity that improve the performance and operation of wireless end-user devices and the wireless networks with which they communicate. The '613 patent is entitled "Wireless end-user device with differential traffic control policy list having limited user control." The asserted claims of the '613 patent are claims 1, 12, 15, 16, and 18.

Claim 1 is *directed to* a wireless end-user device with device-assisted services for protecting network capacity: (1) with a differential traffic control policy list that distinguishes between first and second applications, and applies to Internet service activities by the first applications; (2) with an interface to allow a user to only augment the differential traffic control

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policy for the first applications; (3) classifying the currently connected wireless network and whether a particular application is interacting with the user in the device user interface foreground; and (4) selectively controlling Internet service activities by the particular application based on the differential traffic control policy as augmented by the user.

Defendants' Step One arguments fail for the reasons discussed above for the '541 patent. Defendants also fail the address the specific configurations in the '613 patent claims and the additional limitations recited. The asserted claims of the '613 patent addresses the same technical problem with a similar technical solution, with additional features relating to, e.g., a differential traffic control policy list having limited user control.

For example, claim 1 recites a wireless end-user device that classifies whether the device is connected to and communicating data with a wide area network (WWAN) modem. Based on that classification, as well as classification of a particular application as capable of background activities, the device can selectively allow or deny Internet service activities for that application. The claim further distinguishes between a "first" set of applications for which the user can augment the differential traffic control policy and a "second" set of applications for which the user cannot. The first set could be optional background applications (e.g., game updates) that the user can turn off, whereas the second set could be system or security applications that should remain running.

B.   *Alice* **Step Two: The Asserted Claims Contain Inventive Concepts**

Defendants' Step Two arguments fail for the same reasons as the '541 patent. For the '613 patent, Defendants again parse out each element of the claim in isolation. But even so, they fail to show each element is conventional, let alone the ordered combination.

The failure to address the ordered combination (for either the '541 or '613 patent) is fatal to Defendants' argument. In *BASCOM*, for example, the Federal Circuit found the claim at issue

recited "generic computer, network and Internet components, none of which is inventive by itself."

BASCOM, 827 F.3d at 1350. Nor did the patentee invent "filtering." *Id.* Nevertheless, the Federal

Circuit reversed because the overall claim contained an inventive concept: "the installation of a

filtering tool at a specific location, remote from the end-users, with customizable filtering features

specific to each end user." *Id.* Likewise, here, the ordered combination of claim 1 is inventive. As

discussed above, the claims of the '613 patent recites the inventive concept of controlling network

service usage *on the wireless device itself*, as opposed to "centralized" control mechanisms located

on the network. Placing control mechanisms on the device avoided inefficiencies associated with

network connection and re-connection and provides additional advantages, such as more granular

and flexible control from the device itself, as illustrated by the invention of claim 1. This is

analogous to the inventive concept recognized in *BASCOM*.

Further, the claims of the '613 patent (and the '541 patent) contain the inventive concept

of controlling network service usage *at the application level* and provides a specific way of doing

that. As the specification notes, centralized network solutions had "no assistance from a device-

based software agent (or service processor)." At the same time, the inventors recognized that

specific application activities had enormous and disproportionate impact on network capacity /

performance. *See generally* '641 patent overview and citations. Thus, a system that could use

device-based assistance (such as APIs) and associate and control network usage on an application-

by-application basis would be highly desirable. *See id.* ("*What is needed*" is intelligent network

monitoring to provide real-time traffic monitoring network service usage at the "application

level/layer"), ("application/messaging layer (e.g., a network API as described herein) is used").

C.   Defendants Also Fail to Show Ineligibility for Any Claim

Defendants fail to show that asserted claims 12, 15, 16, and 18 are ineligible. Defendants don't assert that claim 1 "is representative" of other claims, by failing, by failing to make, much less support, any contention. Headwater agrees that claim 1 is not representative. *See Berkheimer v. HP Inc.*, 881 F.3d 1360, 1366-70 (Fed. Cir. 2018) ("A claim is not representative simply because it is an independent claim.") (vacating summary judgment of ineligibility for dependent claims 4-7 as they contained limitations tied to the inventive concept described in the specification).

Indeed, the dependent claims contain limitations that are material to the "directed to" analysis under Step One and are inventive (themselves, and as an ordered combination with claim 1) under Step Two. Claim 12 specifies an additional configuration of the processor that updates the differential traffic control policy from a network element, in addition to the interface that allows the user to augment the policy recited in claim 1. Claims 15–16 recite that the processors are further configured to dynamically change the application of the differential traffic control policy based on a power state of the device or a device usage state, respectively. They further tie the traffic control policy to a hardware state of the device (e.g., power state or usage state) detected by the processor and allows dynamically changing application of the control policy. Claim 18 specifies that under the control policy, certain applications can only access certain network types during certain time windows. It's consistent with the specification's example of certain background activities (such as OS software updates) preferentially occurring at night or while connected to Ethernet.

VI.   THIS RULE 12(c) MOTION IS UNTIMELY AND IMPROPER

The Court can and should resolve this motion by finding that the asserted claims of the '541 and '613 claims are patent-eligible as a matter of law. But this motion as also untimely and procedurally defective and should be denied in any event.

Despite pleadings being closed long ago, Defendants filed this motion for judgment on the

pleadings under Rule 12(c) on the deadline for dispositive motions. As a result, this motion wasn't filed "early enough not to delay trial" as required under Rule 12. For example, the Court may not rule on this motion until shortly before trial, which is only a couple months away. And since Defendants do not—and cannot—contend that amendment would be "futile," Headwater would be entitled to amend its pleadings. Any subsequent motion would disrupt the case schedule.

The timing and posture of this motion raises concerns. For example, the parties conducted fact discovery, expert reports, and expert deposition that addressed the patent-eligibility of the '541 and '613 patents (including offering expert opinions and testimony). Defendants could have filed this Rule 12(c) motion before that work and has no explanation for its delay. Courts have denied Rule 12(c) motions filed after the close of fact discovery on this basis.

Further, because Defendants filed this motion under Rule 12(c), the Court and parties are unable to rely on materials outside the pleadings. Headwater believes that Defendants' eligibility assertion fails as a matter of law. But at a minimum, other materials would be relevant and undermine Defendants' eligibility arguments. They include: the Court's claim construction order; IPR decisions denying institution of the asserted claims; Headwater's expert opinions on eligibility; and Defendants' expert deposition admissions.

The record suggests that Defendants filed this § 101 motion under Rule 12(c) to circumvent and greatly exceed the Court's page limits for summary judgment briefing. The DCO requires exceptional circumstances to exceed those page limits, and Defendants haven't sought leave or made such a showing.[2] This is improper and independently supports denial.

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[2] For the same reason, Headwater is hesitant to ask the Court to "convert" this motion into a summary judgment motion, thereby "causing" Defendants to exceed MSJ page limits.

VII.   CONCLUSION

For the foregoing reasons, Defendants' motion for judgment on the pleadings that the

asserted claims of the '541 and '613 patents are patent-ineligible should be denied.

Dated: April 17, 2025   Respectfully submitted,

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CERTIFICATE OF SERVICE

I hereby certify that on April 17, 2025, all counsel of record who are deemed to have consented to electronic service are being served with a copy of this document via the Court's CM/ECF System per Local Rule CV-5(a)(3).

/s/ Marc Fenster
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